

REMARKS

A. Status of the Claims

Claims 64-127 are pending in the application, and claims 83-127 are withdrawn from consideration at this time in view of the election of the Group I in response to a Restriction Requirement.

Claims 64-69 and 81 are amended. Claims 75 and 80 are canceled. New claims 128-131 are added. Non-limiting support for these revisions can be found, *e.g.*, at pages 8 and 20 of the specification.

B. Priority Claim

The priority paragraph has been amended to include the proper relationship (continuation-in-part) for USSN 10/417,525.

C. Objection

Claim 81 is objected to. An amendment is provided that is believed to address the objection. Reconsideration and withdrawal of the objection is therefore respectfully requested.

D. Rejections Under 35 U.S.C. §102

I. U.S. Patents 6,184,323 and 6,206,550

Claims 64-69 and 72-82 are rejected as anticipated by the '323 patent, and claims 64-69, 72-75 and 77-82 are rejected as anticipated by the '550 patent. Applicant traverses, but in the interest of expediting the prosecution, claim 64 has been amended by incorporation of the phrase "consisting of" instead of "comprising." Thus, in order to maintain the anticipation rejection over the '323 patent or the '550 patent, it must be shown that these references disclose and arrange every element in an identical manner claimed by Applicant.

The composition taught by the '323 patent comprises:

- a) 10-70 wt % of thio(meth)acrylate monomers (I) and optionally (II)
- b) 10-60 wt % of aromatic dimethacrylate monomer (III)
- c) 5-30 wt% of at least one aromatic or polycyclane (*i.e.*, non-aromatic) mono(meth)acrylate monomer
- d) optionally, up to 15 wt% of a polyethyleneglycol di(meth)acrylate, and/or
- e) optionally, up to 15 wt% of a polythiol

and generally, a photoinitiator.

Thus, the reference fails to disclose the specific combination of elements set out in claim 64 and falling within the claimed ranges. Indeed, element c) of the '323 patent can be an aromatic or a non-aromatic monoacrylate or monomethacrylate, element d) of the '323 patent can be a non-aromatic diacrylate or dimethacrylate, whereas Applicant here claims a non-aromatic mono or diacrylate.

It also is worth noting that compositions 1, 2 and 8-11 of Table 1 all contain compounds TBr BA or TBr EBA, which are brominated monofunctional acrylate specifically excluded from claim 64. Compositions 6 and 7 of Table 1 contain compound R604, which is a non-aromatic diacrylate. However, those compositions contain more than 50 wt% of aromatic dimethacrylate monomers based on the total weight of the photopolymerizable monomers and/or oligomers of the composition, and thus fail to anticipate Applicant's claimed range for element c). Further, in Table 2, there is only one composition that contains an acrylate, namely composition 14. This acrylate is TBr EBA, *i.e.*, a brominated monofunctional acrylate, the presence of which is excluded from claim 64.

The '550 patent discloses a photopolymerizable composition comprising:

- (A) 20-80 parts by weight of thio(meth)acrylate monomer (I),
- (B) 20-80 parts by weight of at least one compound having at least one acryloyl or methacryloyl group, and

(C) 0.01-5 parts by weight of at least one photoinitiator.

Element (B) is chosen within a long list of non-aromatic and aromatic acrylate and methacrylate monomers. Moreover, component (B) can comprise several acrylate and/or methacrylate monomers. In one embodiment, component (B) is a mixture of 10-90 parts by weight of compound (B1) bearing two acryloyl or methacryloyl groups and 1-90 parts by weight of monoacrylate or monomethacrylate compound (B2). Compounds (B-1) are aromatic di(meth)acrylates (see passage spanning col. 5, l. 30 to col. 6, l. 45), while cited compounds (B-2) are aromatic monoacrylates or monomethacrylates (see passage spanning col. 6, l. 58 to col. 7, l. 54).

The '550 patent thus fails to disclose a composition comprising simultaneously Applicant's claimed element (A) and (C) within the claimed proportions. Indeed, element (B) of the '550 patent is chosen within a huge amount of mono or poly(meth)acrylate monomers (see passage spanning col. 3, l. 58 to col. 4, l. 28). Although mixtures of these monomers can be used and are exemplified, no mixture of Table 1 comprises both an aromatic dimethacrylate and a non-aromatic mono or diacrylate. When monomers B1 and B2 are used in the '550 patent, all the cited monomers are *aromatic* mono or polyacrylates/polymethacrylates (see passage spanning col. 5, l. 30 to col. 7, l. 54). This is the same for all examples of Table 3. This is contrary to the requirements of claim 64.

In fact, the only way to arrive at Applicant's invention is to pick and chose from various portions of the '323 or '550 patents is to sift through hundreds of different ingredients that are contained in a laundry list type format, and to combine these ingredients in a manner claimed by Applicant. This is essentially a "needle-in-the-haystack" approach. Such picking and choosing is improper in the context of an anticipation rejection. *In re Arkley*, 455 F.2d at 587. In fact,

courts have found no anticipation from disclosures such as the '323 and '550 patents. *See Ex parte Garvey*, 41 U.S.P.Q. 583 (Pat & Trademark Office Bd. App. 1939).

In *Ex parte Garvey*, the claims were directed to a vulcanized product and corresponding methods of making the same. *Id.* at 583. The examiner rejected the invention for anticipation in view of the Dykstra Patent. Dykstra disclosed a compound to which several possible variations that could be made. *Id.* at 584. In finding no anticipation, the Board reasoned that “[w]hile the invention here claimed in its broader aspects is doubtless embraced within the speculative teachings of the references, we doubt if references ... can be fairly applied in rejecting claims such as those on appeal where anticipation can be found only by making one of a very great number of possible permutations which are covered by the reference disclosures.” *Id.* The Court further stated

The likelihood of producing a composition such as here claimed from a disclosure such as shown by the Dykstra patent would be about the same as the likelihood of discovering the combination of a safe from a mere inspection of the dials thereof.

Id.; see also *In re Luvisi*, 342 F.2d 102 (C.C.P.A. 1965); *Ex parte Frey*, 90 U.S.P.Q 383 (Pat & Trademark Office Bd. App. 1946).

In sum, the prior art fails to anticipate the present claims, particularly in light of the additional limitations and “closed” transitional language. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

II. U.S. Patents 6,479,606, 5,741,831 and U.S. Patent 6,999,953

Claims 64, 72, 73, 75 and 77-82 stand rejected over the '606 patent, claims 64-69, 72-75 and 77-82 stand rejected over the '550 patent, and claims 64-69 and 72-82 stand rejected over the '953 patent. Applicant traverses, but as discussed above, claim 64 has been amended by

incorporation of the phrase “consisting of” instead of “comprising,” and thus compounds other than those specified in claim 64 cannot be present in Applicant’s presently claimed composition.

By comparison, the compositions disclosed in the compositions of the ‘606 patent and the ‘953 patent comprise polythiols, while the compositions of the ‘831 patent comprise at least one monomer (III) containing an ethylenic unsaturation which does not contribute to an aromatic system and having a carbon atom bearing a free hydroxyl group in an a position relative to the ethylenic unsaturation. Thus, the claims as presented above are not anticipated by any one of the ‘606 patent, the ‘831 patent or the ‘953 patent. Reconsideration and withdrawal of the rejections is therefore respectfully requested.

E. Rejection Under 35 U.S.C. §103

Claims 70, 71 and 76 are rejected as obvious over any of the references set out above, optionally taken in combination with each other. As set out above, the prior art fails to anticipate the claims from which this claims depend. Thus, the examiner supposition that the prior art discloses the claimed compositions, and thus that the solubility parameter of claims 70-71 would inherently be met, is incorrect.

Again applicant cites to *In re Luvisi*, 144 U.S.P.Q. 646, 649 (CCPA 1965). The invention at issue in *In re Luvisi* concerned, *inter alia*, a composition that can be used to kill undesired vegetation (*i.e.*, a weed killer). *Id.* at 647. The active ingredients in the claimed composition was a 1-alkyl-3-phenyl substituted urea (in particular 3-p-chlorophenyl-1, 1-dimethyl urea (a.k.a. “CMU”) and a hydrated alkali metal borate. *Id.* at 647-48. The composition was rejected for being obvious over a combination of prior art references, in particular, Ryker *et al.* in view of either Knight, Crafts *et al.*, or Litzenberger. *Id.* at 648. Ryker *et al.* concerned a combination of substituted ureas with another herbicidally active compound. *Id.* Ryker *et al.* stated that “it is

characteristic" of the substituted urea compounds "to coact with other herbicidally active compounds, both of the hormonal type herbicidal compounds, to give *synergistic herbicidal results.*" *Id.* at 649 (italics in original). "The term 'sodium borates' [was] included in a list of contact type herbicidal compounds which [Ryker *et al.* says] can be used." *Id.* The secondary references disclosed a weed-killing composition having sodium chlorate and a suitable hydrated borate (Knight), a soil sterilizing compound having borax and sodium chlorate (Crafts *et al.*), and various sodium chlorate-borax combinations were effective in controlling certain weeds (Litzenberger). *Id.*

The Board of Patent Appeals affirmed the obviousness rejection by reasoning that "since borax, a hydrated alkali metal borate, is taught by the secondary references to be a herbicidal compound, it would be obvious to a skilled chemist to employ borax as a herbicidal sodium borate broadly suggested in Ryker *et al.*" *Id.*

The CCPA overturned the obviousness rejection. One of the reasons for this was that although Ryker *et al.* listed sodium borates as a possible class of compounds that could be combined with the substituted ureas, it did so in a generic list that included several other classes of compounds. *Id.* In particular, the CCPA reasoned:

Ryker *et al.* contains, for all practical purposes, a "needle-in-the-haystack" type of disclosure with respect to borax. It states, in effect, that if one mixes an alkyl urea of a certain designated formula with *any other* herbicidal agent, a composition giving synergistic herbicidal results will be obtained. [Ryker *et al.*] set[s] forth the following list of *other materials* which can be used: [17 generic classes of compounds are listed]. Nearly all of these entries are generic in nature and together represent a very wide range of chemical types, including both organic and inorganic. The "preferred" compounds are said to be selected from the group consisting of [a list of compounds is provided, which does not include sodium borate]. Neither the genus "sodium borates" nor the species therein is mentioned. The patent then discloses approximately sixty specific compositions alleged to be illustrative of the invention. None of these compositions contains borax, or any other alkali metal borate. We therefore conclude that Ryker *et al.* does not *legally disclose* any particular borate.

Id. at 649-650. The CCPA then noted that the secondary references failed to suggest combining their respective ingredients with substituted ureas such as the ones disclosed in Ryker *et al.* *Id.* From this, the CCPA concluded that the claimed composition was not obvious in view of the prior art. *Id.* at 651. Interestingly, the CCPA quoted and emphasized the following passage from *Ex parte Garvey*, 41 U.S.P.Q 583, 584 as being “very much in point” with the facts in its case (note that the rejection in *Ex parte Garvey* was based on anticipation not obviousness):

While the invention here claimed in its broader aspect is doubtless embraced within the speculative teachings of the references... *The likelihood of producing a composition such as here claimed* from a disclosure such as shown by the Dykstra patent *would be about the same as the likelihood of discovering the combination of a safe from a mere inspection of the dials thereof.*

In re Luvisi at 650-51 (emphasis added).

The only way to accomplish the search and find mission/needle-in-a-haystack approach is to use hindsight reasoning. Applicant certainly understands that a hindsight approach is necessary to search the invention. However, one should avoid using hindsight analysis to support the underlying obviousness rejection. *See* MPEP § 2142 (“[k]nowledge of applicant’s disclosure must be put aside in reaching this determination...impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art”); *see also In re Geiger*, 815 F.2d 686 (Fed. Cir. 1987) (“Based upon the prior art and the fact that each of the three components of the composition used in the claimed method is conventionally employed in the art for treating cooling water systems, the board held that it would have been *prima facie* obvious, within the meaning of 35 U.S.C. 103, to employ these components in combination for their known functions and to optimize the amount of each additive...Appellant argues...hindsight reconstruction or at best,...’obvious to try’... *We agree with appellant*”) (emphasis added).

In sum, the Examiner has provided no additional arguments or reasoning as to why the references would suggest those elements are that are missing. Indeed, the Examiner's failure to cite additional art, in light of the inadequacy of the anticipation rejections as set out above, indicates that at least one of the elements of the claimed invention is missing.

F. Rejoinder of Withdrawn Claims

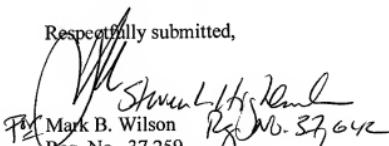
Applicants submit that, given the allowable nature of the claims currently under examination, and similar amendments to the withdrawn claims, pursuant to the Rules and/or the statements of the Restriction Requirement, rejoinder of claims that have been withdrawn from prosecution is proper.

G. Conclusion

Applicants believe that they have submitted a complete reply to the Office Action mailed September 9, 2009, and respectfully request favorable consideration of the claims in view of the statements contained herein.

Should the Examiner have any questions, comments, or suggestions relating to this case, the Examiner is invited to contact the undersigned Applicants' representative at (512) 536-3035.

Respectfully submitted,


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